

WHAT IS CLAIMED IS:

1. A web server framework for browser-based applications utilizing an application server, said web server framework comprising:
 - (a) a Command Servlet adapted to receive an HTTP request from said browser;
 - (b) an Application Controller adapted to receive information from said Command Servlet in response to said HTTP request, said Application Controller adapted to communicate with and receive data from said application server;
 - (c) at least one Java Bean created by said Application Controller to handle said HTTP request, said Java Bean adapted to communicate with and receive data from said application server, said Java Bean adapted to pass control back to said Command Servlet upon receiving said data;
 - (d) at least one Java Server Page, said Java Server Page adapted to receive a call from said Command Servlet after said Command Servlet regains control from said Java Bean, said Java Server Page adapted to attach HTML to any dynamic data represented in said Java Bean and format the output for said browser in response to said HTTP request; and
 - (e) at least one Compiler adapted to receive said HTML and said dynamic data from said Java Server Page and compile said HTML and said dynamic data into a Java servlet, said Java Servlet adapted to be run directly by said Web Server in response to a similar future said HTTP request.
2. A web server framework according to claim 1 additionally comprising a Java Virtual Machine adapted to process said Java Servlet.
3. A web server framework according to claim 1 additionally comprising a session cache maintained by said Web Server adapted to track user information between said HTTP requests.

09943136-082901

4. A web server framework according to claim 1 wherein said Java Bean represents a business object.
5. A web server framework according to claim 1 wherein the said communication with said application server is accomplished by an application selected from the group consisting of CORBA-based messaging services and middleware.
6. A web server framework according to claim 1 additionally comprising at least one Proxy Pool adapted to multiplex said communications with said application server.
7. A web server framework according to claim 1 wherein said application server is a Backend Logic Server.
8. A web server framework according to claim 1 additionally comprising at least one external database in communication with said application server, said external database adapted to house said requested data.
9. A web server framework according to claim 1 additionally comprising a domain firewall adapted to isolate said Command Servlet from said application server.
10. A web server framework according to claim 1 wherein said Java Servlet is adapted to handle related to requests selected from the group consisting of Security, Data Control, Internationalization, State Management, Multi-Window Tasks, Servlet Multi-Threading, Middleware Connection, Error Handling, Logging, and Tracing.
11. A web server framework according to claim 1 wherein said web server framework is an error framework.
12. A web server framework according to claim 11 wherein said error framework is adapted to provide a common base for application-specific Java exceptions.

13. A web server framework according to claim 11 wherein said error framework is adapted to provide language-specific formatting of error messages.
14. A web server framework according to claim 1 wherein said web server framework is a logging and tracing framework.
15. A web server framework according to claim 14 wherein said logging and tracing framework is adapted to provide a common method of logging messages and events.
16. A web server framework according to claim 14 wherein said logging and tracing framework is adapted to format log messages for subsequent interpretation.
17. A web server framework according to claim 14 wherein said logging and tracing framework is adapted to provide at least two levels of logging, each said level allowing differing amounts of data capture.
18. A web server framework according to claim 1 wherein said web server framework is a connection framework.
19. A web server framework according to claim 18 wherein said connection framework is adapted to provide a common method of establishing pools of connections to other resources.
20. A web server framework according to claim 19 wherein said pools are selected from the group consisting of JDBC, MQ-Series, and CORBA Pools.
21. A web server framework according to claim 19 wherein said connection framework is adapted to allow applications built on said framework to define characteristics of said pools.
22. A web server framework according to claim 1 wherein said web server framework is a reference data framework.

23. A web server framework according to claim 22 wherein said reference data framework is adapted to provide a mechanism for applications built on said framework to store common lists of data in memory for efficient access by said applications.
24. A web server framework according to claim 23 wherein said reference data framework is adapted to provide a mechanism for Java Server Pages to build choice lists from said data lists.
25. A web server framework according to claim 1 wherein said web server framework is a security framework.
26. A web server framework according to claim 25 wherein said security framework is adapted to provide a common model for applications to maintain security information available to applications built on said framework.
27. A web server framework according to claim 25 wherein said security framework is adapted to integrate with other said frameworks to provide the frameworks with security information.
28. A web server framework according to claim 25 wherein said security framework is adapted to allow applications built on said framework to check security on any object type.
29. A web server framework according to claim 1 wherein said web server framework is an international framework.
30. A web server framework according to claim 29 wherein said international framework is adapted to provide a set of objects that are country-dependant.
31. A web server framework according to claim 30 wherein said objects are selected from the group consisting of address, currency, name, and phone number objects.

32.A web server framework according to claim 29 wherein said international framework is adapted to provide formatting routines that may be modified by applications built on said framework.

33.A web server framework according to claim 30 wherein said international framework is adapted to provide methods for displaying said objects.

34.A web server framework according to claim 30 wherein said international framework is adapted to provide methods for gathering data for said objects.

35.A system for operating web-based applications, said system comprising:

- (a) an Web browser, said Web browser adapted to generate and receive information via HTTP;
- (b) an application server, said application server adapted to run business logic and access data necessary for said web-based applications; and
- (c) a Web server in communication with said Web browser and said application server, said Web server comprising at least one web server framework, said web server framework comprising:
 - (i) a Command Servlet adapted to receive an HTTP request from said Web browser;
 - (ii) an Application Controller adapted to receive information from said Command Servlet in response to said HTTP request, said Application Controller adapted to communicate with and receive data from said application server;
 - (iii) at least one Java Bean created by said Application Controller to handle said HTTP request, said Java Bean adapted to communicate with and receive data from said application server, said Java Bean adapted to pass control back to said Command Servlet upon receiving said data;

- 09441315-082901
- (iv) at least one Java Server Page, said Java Server Page adapted to receive a call from said Command Servlet after said Command Servlet regains control from said Java Bean, said Java Server Page adapted to attach HTML to any dynamic data represented in said Java Bean and format the output for said Web browser in response to said HTTP request; and
 - (v) at least one Compiler adapted to receive said HTML and said dynamic data from said Java Server Page and compile said HTML and said dynamic data into a Java servlet, said Java Servlet adapted to be run directly by said Web Server in response to a similar future said HTTP request.

- 36. A system for operating web-based applications according to claim 35 additionally comprising a Java Virtual Machine adapted to process said Java Servlet.
- 37. A system for operating web-based applications according to claim 35 additionally comprising a session cache maintained by said Web Server adapted to track user information between said HTTP requests.
- 38. A system for operating web-based applications according to claim 35 wherein said Java Bean represents a business object.
- 39. A system for operating web-based applications according to claim 35 wherein the said communication with said application server is accomplished by an application selected from the group consisting of CORBA-based messaging services and middleware.
- 40. A system for operating web-based applications according to claim 35 additionally comprising at least one Proxy Pool adapted to multiplex said communications with said application server.

41. A system for operating web-based applications according to claim 35 wherein said application server is a Backend Logic Server.
42. A system for operating web-based applications according to claim 35 additionally comprising at least one external database in communication with said application server, said external database adapted to house said requested data.
43. A system for operating web-based applications according to claim 35 additionally comprising a domain firewall adapted to isolate said Command Servlet from said application server.
44. A system for operating web-based applications according to claim 35 wherein said Java Servlet is adapted to handle related to requests selected from the group consisting of Security, Data Control, Internationalization, State Management, Multi-Window Tasks, Servlet Multi-Threading, Middleware Connection, Error Handling, Logging, and Tracing.
45. A web server framework according to claim 35 wherein said web server framework is an error framework.
46. A web server framework according to claim 46 wherein said error framework is adapted to provide a common base for application-specific Java exceptions.
47. A web server framework according to claim 46 wherein said error framework is adapted to provide language-specific formatting of error messages.
48. A web server framework according to claim 35 wherein said web server framework is a logging and tracing framework.
49. A web server framework according to claim 48 wherein said logging and tracing framework is adapted to provide a common method of logging messages and events.

50. A web server framework according to claim 48 wherein said logging and tracing framework is adapted to format log messages for subsequent interpretation.
51. A web server framework according to claim 48 wherein said logging and tracing framework is adapted to provide at least two levels of logging, each said level allowing differing amounts of data capture.
52. A web server framework according to claim 35 wherein said web server framework is a connection framework.
53. A web server framework according to claim 52 wherein said connection framework is adapted to provide a common method of establishing pools of connections to other resources.
54. A web server framework according to claim 53 wherein said pools are selected from the group consisting of JDBC, MQ-Series, and CORBA Pools.
55. A web server framework according to claim 53 wherein said connection framework is adapted to allow applications built on said framework to define characteristics of said pools.
56. A web server framework according to claim 35 wherein said web server framework is a reference data framework.
57. A web server framework according to claim 56 wherein said reference data framework is adapted to provide a mechanism for applications built on said framework to store common lists of data in memory for efficient access by said applications.
58. A web server framework according to claim 56 wherein said reference data framework is adapted to provide a mechanism for Java Server Pages to build choice lists from said data lists.

59. A web server framework according to claim 35 wherein said web server framework is a security framework.
60. A web server framework according to claim 59 wherein said security framework is adapted to provide a common model for applications to maintain security information available to applications built on said framework.
61. A web server framework according to claim 59 wherein said security framework is adapted to integrate with other said frameworks to provide the frameworks with security information.
62. A web server framework according to claim 59 wherein said security framework is adapted to allow applications built on said framework to check security on any object type.
63. A web server framework according to claim 35 wherein said web server framework is an international framework.
64. A web server framework according to claim 63 wherein said international framework is adapted to provide a set of objects that are country-dependant.
65. A web server framework according to claim 64 wherein said objects are selected from the group consisting of address, currency, name, and phone number objects.
66. A web server framework according to claim 63 wherein said international framework is adapted to provide formatting routines that may be modified by applications built on said framework.
67. A web server framework according to claim 64 wherein said international framework is adapted to provide methods for displaying said objects.
68. A web server framework according to claim 64 wherein said international framework is adapted to provide methods for gathering data for said objects.

69. A method for operating a web-based application, said method comprising the steps of:

- (a) receiving an HTTP request from a Web browser to a Command Servlet;
- (b) creating at least one Java Bean to handle said HTTP request, said creation determined by said Command Servlet, said Java Bean adapted to communicate with and receive data from an application server;
- (c) creating at least one Java Server Page adapted to receive a call from said Command Servlet, attach HTML to any dynamic data represented in said Java Bean, and format an output response for said Web browser in response to said HTTP request;
- (d) compiling said HTML and said dynamic data received from said Java Server Page into a Java Servlet, said Java Servlet adapted to be run directly in response to a similar future HTTP request; and
- (e) sending said formatted response to said Web browser.

70. A method for operating a web-based application according to claim 69 additionally comprising the step of processing said Java Servlet with a Java Virtual Machine.

71. A method for operating a web-based application according to claim 69 additionally comprising the step of generating and maintaining a session cache to track user information between said HTTP requests.

72. A method for operating a web-based application according to claim 69 additionally comprising the step of multiplexing said communications with said application server.